

Paper presented at the 18<sup>th</sup> Annual Conference of the Yale Chapter of the International Society of Tropical Foresters "Strategies for Landscape-Scale Restoration in the Tropics", January 26-28, 2012

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## Restoring landscapes – governing place

### Forest landscape restoration – a learning approach to landscape governance

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#### Abstract

Forest landscape restoration is rapidly gaining ground. Driven by climate change, there are currently many efforts underway to establish restoration projects across the globe. The biophysical and economic potentials are being assessed, innovative financial mechanisms are being developed, and ambitious targets are being set to restore the world's lost forests. Pilot projects are aimed at generating 'good practice' and 'lessons learned', to be scaled up to higher levels of policy making and trickle down elsewhere. However, landscape restoration is nothing new. People have always been constructing, reconstructing and restoring their landscapes to safeguard their lives and livelihoods. A better understanding of existing local practice will help to better identify, plan and implement new restoration initiatives, and assure sustainable and inclusive outcomes. Understanding local restoration practice means: 1) understanding how landscapes are historically formed by people who have collectively shaped and reshaped their place within their biophysical conditions; and 2) understanding how landscape dynamics relate to governance processes and spatial decision-making. Thinking of governance from a landscape perspective adds a spatial dimension to governance: '*spatialisation*' of governance, as a means of reconnecting governance to landscape, citizenship to place. Adopting a landscape perspective on governance offers the opportunity to cross administrative and political boundaries, allowing for broader groups of actors to engage in spatial decision-making. Constructing networks across the 'politics of scale' thus becomes an instrument for enhancing learning processes within and between landscapes, as an alternative to scaling up good practice and scaling down generic policy.

#### 1. Forest landscape restoration – global demands versus local practice

Forest landscape restoration is of growing importance within the current debate on climate change. It is increasingly recognised that the conservation and maintenance of existing forests is not enough and that restoration of the world's lost forests is necessary to mitigate the negative impacts of climate change. Studies show that no less than two billion hectares worldwide offer opportunities for restoration, representing an area larger than Latin America (GPFLR, 2011). Moreover, forest landscape restoration aims to reconcile ecological and economic interests, offering opportunities for both conservation and direct foreign investment in commercial production. At a recent conference of the Global Partnership on Forest Landscape Restoration in Bonn, a commitment was launched to restore 150 million hectares of lost forests and degraded lands worldwide ('*The Bonn Challenge*', September 2011<sup>1</sup>). The 150 million hectare restoration target directly relates to existing international commitments including the Convention on Biological Diversity, which calls for the restoration of 15% of degraded ecosystems by 2010<sup>2</sup>, and the UN Framework Convention on Climate Change, which calls for countries to not just halt but also reverse the loss and degradation of their forests<sup>3</sup>. Forest landscape restoration therefore seems to have become fully incorporated in global environmental politics, offering an opportunity to satisfy

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<sup>1</sup> 'The Bonn Challenge', September 2011, available at [www.ideastransformlandscapes.org](http://www.ideastransformlandscapes.org)

<sup>2</sup> CBD Strategic Plan Target 15

<sup>3</sup> The REDD+ goal and the Cancun COP 16 decision on reversing forest and carbon loss and enhancing forest carbon stocks

the global demand for carbon storage with measurable results. To this end, the restoration potentials of specific countries and landscapes are currently being assessed, and instruments to measure restoration outcomes as well as innovative financial mechanisms to support large-scale restoration projects are currently being developed. The big questions are where to start pilot project activities, how to build up a coherent body of knowledge, and how to upscale good practices and lessons learned, to be translated into policy guidelines for wider application at the regional or global scale.

How does this global debate on forest landscape restoration relate to localised landscapes and their specific and often complex dynamics? Most landscapes are inhabited by people who, over centuries, have shaped their lives and livelihoods within their specific environmental conditions, a process that has often resulted in ingenious systems of extraction, exploitation and protection, according to people's current and future needs. As natural protagonists of landscapes, landscape inhabitants usually share a sense of belonging to their place, implying a certain sense of ownership and collective responsibility. They take part in decision-making processes concerning the management, conservation and possibly restoration of the landscapes they consider to be theirs. At the same time, landscape inhabitants are involved in complex social networks transcending physical landscape boundaries. This means that through their inhabitants, landscapes are linked to wider networks beyond their ecological and politico-administrative boundaries, linking them to the wider world of global economic and political trends.

Restoring forests from a landscape perspective allows for advantage to be taken of the collective agency of landscape inhabitants, from a cultural, ecological or socio-economic perspective. It also helps to position forest landscape restoration activities within wider economic and political networks. This opens up opportunities to link global interests with local practice, taking advantage of the multiple networks and dynamics that landscapes are usually part of. But is this still aligned with the idea of scaling up local practice, to be transformed into policy guidelines and applied in other contexts? If it is not, then what is the alternative for triggering local action to restore the world's lost forests? To answer these questions, we need a better understanding of the specific meaning of landscapes, how they are shaped, how they are governed, and how they are transformed over time. This may provide new insights in how to successfully restore degraded landscapes.

## **2. Understanding landscapes: where local and global meet**

Within the world of forest and nature conservation, attention is gradually shifting from the conservation of single species to the conservation of the entire mosaic landscapes they are part of. This shift is first of all supported by landscape ecologists, who emphasise the importance of ecological integrity by strengthening the ecological 'matrix' that represents the dominant land cover to enhance species' mobility and biodiversity at the landscape level (Hecht, 2011). But it is also supported by geographers, socio-economic scientists and spatial planners who, rather than emphasising the ecological matrix, emphasise the complexity of anthropogenic landscapes. In this second line of thought, it is increasingly recognised that productive land-use systems do not necessarily reduce the biodiversity of natural ecosystems; they can also enhance this by creating new landscape elements and increasing the bio-cultural diversity of landscapes (Wiersum, 2003). This has led to an increased appreciation of multifunctional land-use systems in which both production and biodiversity functions are valued (Van Noordwijk *et al.*, 1997), which in turn offers scope for ecologically sound and economically productive land-use patterns (Hobbs and Morton, 1999).

It is in this context that Urban *et al.* (1987) describe a landscape as a mosaic of heterogeneous land forms, vegetation types and land uses. Guilmour (2008) adds that landscapes are mosaics made up of different components, but 'pieced together to form an overall landscape-level patchwork', thus emphasising the internal coherence between the various components of the mosaic. Görg (2007) goes one step further by stating that the concept of landscape creates a bridge between the natural-spatial conditions and societal production in a particular place. According to Görg, landscape refers to the 'spatial-temporal aspects of the metabolism between nature and society', framing landscape as a realm of human-environmental interaction, tagged into place. Taylor (2008) emphasises the strong emotional attachment of inhabitants to their landscape,

forming the basis for identity and belonging, and a strong sense of place. Shaping the landscape is 'making place', building stories and memories, and promoting a sense of local distinctiveness, a process which can be actively strengthened through dialogue, storytelling, naming, mapping and using landmarks as symbols for regional identity, as shown by Buizer and Turnhout (2011) and Van Oosten (2004, 2006, 2010). While not denying the wide variety of stakeholders' interests (production, protection, sustaining livelihoods, service provision, etc.) which may lead to spatial conflict, place making can also trigger a collective concern, and mobilise stakeholders' capabilities and intrinsic power to collectively shape, sustain and restore their landscapes. This interpretation of landscapes comes close to the way in which Massey (2005) writes about place. She considers place not just as a locality where people meet, but rather as an intersection of partly overlapping social networks ranging from the very local to the global, hence as a location where the global and the local meet. Massey's interpretation is based on the image that in today's globalised world place no longer matters. This image is false, so she says, since it is because of globalisation that we notice increasing geographical fragmentation and spatial disruption, which makes people long for a renewed sense of place. It is this notion of place which allows for a better understanding why most landscapes have multiple identities, since they are products of layered sets of linkages, both local and global. They do not always have clear boundaries, but they do have cores, which are constructed through human interaction within a particular spatial setting but linked to a wider world.

### **3. From landscape restoration to landscape governance**

Forest landscape restoration has often been approached as a management practice. There are many handbooks and guidelines on *how* to manage and restore degraded landscapes from a biophysical perspective (suitability of soil types and plant species) or an ecological perspective (strengthening the matrix). This has led to a range of restoration programmes in which 'landscape' is almost synonym for 'scale', and local restoration initiatives are being scaled up to higher levels of implementation. This very much fits into the ecological approach of strengthening the physical and ecological dynamics within the matrix, associated with formal ex-ante stakeholder engagement followed by a rather technically driven planning process, with little attention to issues like the social or economic relevance of species and land or tree ownership (Sayer & Boedhihartono, 2009).

As a reaction to this rather technical approach, a more sensitive approach of on-the-ground engagement ('muddling through') emerged, which is marked by a more reflective and adaptive form of management (Sayer *et al.*, 2008). Within such an adaptive management approach it is generally recognised that natural systems and social systems co-evolve, and their management has to be sensitive and responsive to constantly changing circumstances through intense monitoring and social learning (De Boo & Wiersum, 2002). Planning of management practices is therefore not 'just' a technical management process based on specialist insights but embedded in processes of participatory decision-making, taking into account the plurality and dynamics of stakeholder interests and power positions. Thus, the adaptive management of landscapes places forests within larger spatial units, feeding decisions on multifunctional land use at the landscape level which are not only reflecting locally applied management practices but also the changes in resource access, land-use rights, and marketing arrangements (*ibid*). It considers not only the question of *how* to restore, but also *what* and *where* to restore.

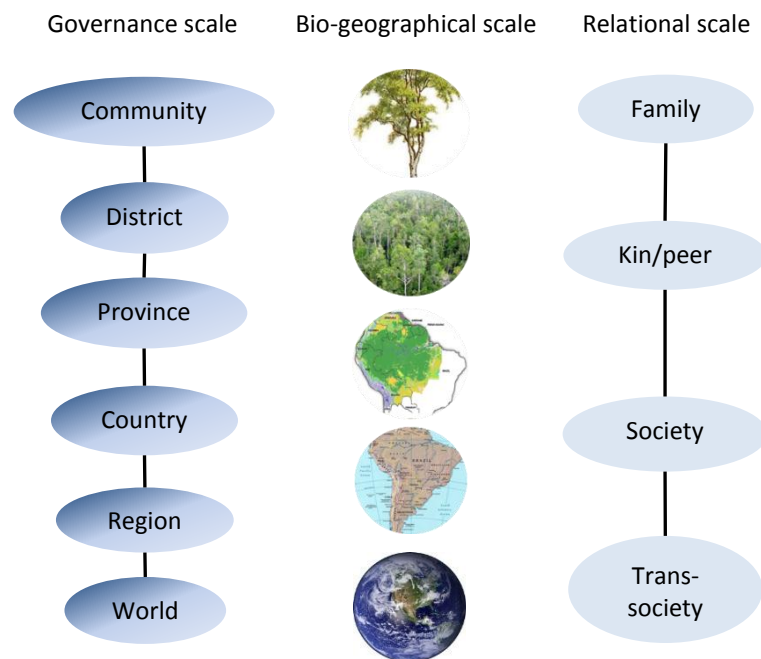
However, looking at landscapes as complex and dynamic systems having multiple benefits for a variety of societal demands, choices and trade-offs implies that adaptive and reflective management is not enough. Besides (adaptive) management, this also requires governance. Governance, sometimes referred to as 'whole system management', sets out the framework within which management can thrive (Ros-Tonen *et al.*, 2008). Therefore, a governance framework encompasses not only the management arrangements but also the institutional arrangements, and even the norms and principles that guide the design of the underlying institutions (*ibid*). In relation to forest landscape restoration, the key question is *for whom* landscapes are being restored. Good landscape governance would therefore provide an appropriate enabling environment for forest landscape restoration to take place. Landscapes would thus provide the ideal space for stakeholders to bargain and negotiate based on their interests, and to make their decisions regarding the necessary trade-offs. But are there sufficient institutions at the landscape level for stakeholder negotiations and decision-making to take place? Are there mechanisms for transforming negotiated decisions into rules and regulations regarding the landscape, and which

are linked to administrative structures and accountability systems already in place? In other words, is there something that could be called landscape governance and what does it look like?

Most governance literature focuses on the changing role of states, citizens and organised private actors, such as civil-society organisations and private companies, in the process of governing public space. It focuses on governance taking place within the politico-administrative constellation of nation-states, including their political constituencies and administrative units, with human interactions being framed by institutions at all levels of human enterprise (household, municipality, district/province, nation, region, globe; UNDP, 2004). Hence most governance literature describes the way in which citizens articulate their interests, exercise their rights and responsibilities, and regulate power amongst those who govern and those who are governed; all framed in processes of political decision-making within the boundaries of public administration. But such boundaries usually do not coincide with the biophysical, ecological or socio-cultural boundaries defining the landscape (figure 1).

Hence the actual questions here are: how are decisions regarding the landscape being taken, and what are the existing mechanisms guiding negotiation, decision-making and trade-offs at the landscape level? Is there such a thing as landscape governance, moving beyond political-administrative boundaries, matching the biophysical, ecological and socio-cultural characteristics of the landscape?

Figure 1: The mismatch between governance, bio-geographical and relational scales



Freely adapted from Cash et al, 2006

#### 4. Forest landscape restoration: adding a spatial dimension to governance

Politically and administratively defined governance structures rarely coincide with the characteristics and boundaries of landscapes. This is most apparent in 'developing countries'<sup>4</sup>, where political boundaries originated from rivalries between colonial powers, ignoring social, cultural and environmental notions of place. Present-day processes of state reform, such as the decentralisation and devolution of spatial decision-making, are equally dominated by politico-

<sup>4</sup> Although the term 'developing countries' refers to the old dichotomy between 'developed countries' and 'developing countries', which no longer exist, the term is being used here to refer to political systems that have been subject to strong exogenous influences, in this case by colonial powers.

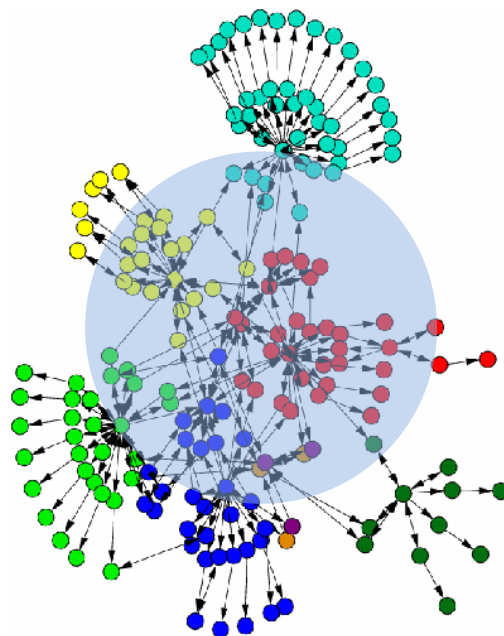
administrative hierarchies of scale and do not take into account the spatial dimension of landscape characteristics and regional identities. This phenomenon has disrupted the 'natural' connectedness between landscape dynamics and its inhabitants – between people and place.

The lack of such a spatial dimension in the current governance debate is recognised by Görg (2007), who stresses the importance of 'restructuring the spatial dimension of politics'. He emphasises the interconnections between socially constructed spaces and the natural conditions of place. He interprets the term 'landscape' as bridging the gap between social and natural sciences, and *landscape governance* as a means of reintroducing the spatial dimension and the relevance of spatial scales. Such a *spatialisation* of governance could thus respond to society's need for a sense of place, thus confirming that, despite globalisation, place does matter.

If mosaic landscapes are considered to be spatial reflections of multiple networks cutting across ecological, geographical and political scales, then landscape governance would logically follow a network approach. In such an approach, multiple actor networks operate at different political scales, but they all converge in or around the landscape (figure 2). Despite differences in interests and scales of operation, actors take part in overlapping networks, and are interrelated through their belonging to the place they consider to be 'theirs'; they share an interest, or a sense of belonging that triggers collective agency and ownership. While not denying the existence of opposed interests and contested spaces, landscape governance could offer a basis for dialogue in an otherwise conflictive process of negotiation, marked by power imbalances and strife. Landscape governance would therefore not be a linear planning process targeting a single management outcome, but a highly volatile and unpredictable process of negotiations and trade-offs with multiple outcomes (Sayer *et al.*, 2008).

If landscapes are composed of overlapping networks connected to various spatial and political levels and scales, then landscape governance implies there is no longer a need for scaling up or scaling down. Since landscapes represent a multiple-scale interface between the local and the global, they provide the missing link between multilevel politics and the specific natural-spatial conditions of place. This is what Görg means by the 'politics of scale', in which landscapes form an appropriate realm for governance to be practiced (Görg, 2007).

Figure 2: Landscapes as the politics of scale



## 5. Enhancing landscape governance: a learning approach

Several authors describe existing practices of landscape governance. Görg (2007) for example, describes a case of landscape governance in the Südraum area in Germany, where landscape governance is being practiced through the active engagement of both public and private stakeholders, including policy-makers and scientists, in a process of collective action. Triggered by a deep concern for the severely degraded state of the former mining area, stakeholders managed to overcome their diverging interests, and engaged in a problem-focused learning process. Taking advantage of the political and economic transformation that led to the abandonment of mining activities, massive restoration took place, turning the degraded and impoverished area into a lush landscape, where planted forests and artificial lakes offered new economic opportunities for tourism development and environmentally friendly activities generating regional income. It was the spirit of collaborative learning embedded in networks across spatial and political scales that has made landscape governance a process which is neither steered from above nor from below, neither from the inside nor from the outside, but from an integrated relational perspective embedded in the politics of scale and strongly anchored in place. Despite the difficult socio-political context, stakeholders in the Südraum have managed to collectively 'shape a new landscape' through collaborative multi-stakeholder learning, anchored in the natural conditions of the landscape.

Van Paassen *et al.* (2011) equally recognise the importance of collaborative learning for landscape governance. Based upon multiple case studies from all over the globe, they conclude that landscape governance entails multiple actors at multiple geographical and political scales interacting through partly overlapping networks, resulting in a web of arrangements within both the formal and the informal realms of governance. From an analysis of various case studies, they state that landscape governance is largely based on formal and informal arrangements, at multiple scales, requiring strong stakeholder interaction through collaborative learning based upon a collective sense of place.

Both Görg and Van Paassen emphasise collaborative learning as an indispensable element of landscape governance. This is collaborative learning based on a shared understanding of natural-social interactions (relations, structures, representations) within a landscape, with the potential to help landscape actors to better understand, explain or predict those processes taking place in, or having an impact on, their landscapes. Such '*landscape learning*' follows a problem-focused approach, which contributes to a better process of informed and supported policy-making, a process in which policy-makers and practitioners do not necessarily strive for 'win-win' negotiations, which tend to privilege compromise over problem solving, but engage in an inter-institutional process of mobilising knowledge, identifying and sharing good practice, and developing stakeholders' capacities for their wider application (IUFRO, 2010). Landscape learning could be facilitated through the creation of platforms, networks or other institutional arrangements operating at the landscape level.

## 6. Landscape learning as governance practice

In order to facilitate collaborative learning at the landscape level, it is necessary to better understand how societies learn and how learning is related to the spatial context in which it takes place. Societal learning is generally referred to as 'social learning'. In relation to natural resources, social learning can be defined as 'a continuous dialogue and deliberation among scientists, planners, managers and resource users to explore problems and their solutions; communication together with experimentation allows for a constant adaptation to adjust and improve management' (Maarleveld & Dangbégnon, 1999, quoted by De Boo & Wiersum, 2002). Moreover, elements like capacity building, conflict mitigation, stakeholder negotiation and political decision-making have been added as important elements of social learning (Buck *et al.*, 2001), which links social learning to the broader concept of governance.

In an attempt to operationalise social learning, Wenger (2000, 2006) introduces the concept of *communities of practice* (Wenger, 2000, 2006). Communities of practice are formed by people 'who engage in a process of social learning in a shared domain of human endeavour; because they share a concern or a passion for something they do and learn how to do it better as they interact regularly' (Wenger, 2006). Members are practitioners who develop a shared repertoire of resources (experiences, stories, tools and ways of addressing problems) and use these to create a shared



practice. It is this experience of sharing practice that creates a sense of 'belonging', or group identity, to which members adhere. Social learning systems, be it organisations, societies or landscapes, thus become constellations of communities of practice, each taking care of a specific aspect of reality, a specific practice. Since most people, inhabitants or citizens take part in more than one community, they constantly move from one community to another, thus building bridges across communities, stretching their boundaries, reconfiguring relations, and creating networks of practitioners who, despite differences in professional background or specific interests, are all connected to one common ground. It is this common ground that forms the basis for social cohesion, generates collective insights, and strengthens the sense of belonging to an organisation, a society – or a landscape (Wenger, 2006).

The terminology used by Wenger (communities, boundaries, belonging) fits the spatial language used in landscape approaches. That is why Keen *et al.* (2005) use the concept of social learning, but add a spatial dimension to it when they define social learning as 'the collective action and reflection that occurs among different individuals and groups as they work to improve the management of their environmental relations'. Such '*spatialisation*' of social learning then refers to the collaboration of actors within a spatial setting; it occurs when actors in a landscape start building metaphorical bridges and stretching their boundaries in order to construct a common identity for their place, not only within communities of actors sharing compatible interests, thus *connecting the likewise* (Castells, 2009; Leeuwis and Aarts, 2010), but also connecting those with conflicting interests, reconfiguring their interdependent relationships and triggering a common concern (Leeuwis and Aarts, 2010). Wals *et al.* (2009) confirm this by stating that social learning takes place when 'divergent interests, norms, values and constructions of reality meet in an environment that is conducive to learning'. Social learning can therefore be effective only if asymmetries of knowledge and power between different stakeholders are taken into account and effectively taken care of (Giller, 2008).

Following Görg (2007), Massey (2005), Van Paassen *et al.* (2011), De Boo *et al.* (2002), Wenger (2000/2006), Keen *et al.* (2005), Leeuwis and Aarts (2010), Wals *et al.* (2009) and others, landscape learning can be described as a form of social learning within a specific spatial setting – a landscape. It can be perceived as a fluid process of interacting communities of practice, each having different spatial interests but sharing a common sense of place. Since community members move within and across communities, they learn more about the overall dynamics of mosaic landscapes and start understanding the complexity of the management of such landscapes and the challenges of their governance. Linking these learning processes at multiple scales of spatial decision-making helps to increase understanding, interaction, negotiation and collective action across scales. In other words, it helps *stretching beyond the local fix* (Lange *et al.* (2010), linking to larger landscape dynamics. By constructing new landscape institutions such as multi-stakeholder and multilevel networks, which are anchored locally in shared identities and common concerns, landscapes are not 'just' managed, conserved and restored, but truly governed. Thus, landscape governance becomes an instrument for re-establishing the connection between politics and place, between citizens and their environment, between the local and the global. Governing landscapes through linking and learning, action and interaction, and a renewed sense of place offers a new way to produce sustainable landscapes.

## Conclusion

Forest landscape restoration is playing an increasingly important role in global environmental politics. There is a demand for pilot experiences, to be scaled up, translated into policies and multiplied to give a wider scale of operation. This is a rather technocratic way of approaching forest landscape restoration, in which restoration is regarded as a typical management practice embedded in spatial planning procedures. However, forest landscape restoration could also be perceived as a governance practice in which landscape actors analyse their options, negotiate their interests, and decide what is to happen in the landscape they consider to be theirs. A complicating factor in this interpretation, however, is that landscapes are usually not represented in formal constellations of governance and their institutional arrangements such as law, regulations, political mandates and the delegation of power. This makes landscape governance a rather vague concept, which seems hard to define.

Nevertheless, evidence shows that landscape governance does exist. Albeit not officially embedded in administrative and political scales, landscape governance is performed through informal institutions associated with landscape-related networks, identities, memories and shared practices, either directly or indirectly linked to the politics of scale. Embedded in informal yet functional landscape institutions, forest landscape restoration has the potential to make use of the shared identities of landscape actors who, despite their diversity and heterogeneity, share a common sense of responsibility and ownership. Nurturing this sense of ownership through an active process of 'place making' supports the development of agency and enables restoration to happen. Building communities of practice within and between landscapes helps to overcome competing interests and nurtures multi-stakeholder dialogue, making forest landscape restoration a form of landscape governance. In this way, the issue of scaling up becomes irrelevant when landscape governance is perceived as the politics of scale, linking landscape dynamics to complex regional and global networks.

Institutionalisation of landscape governance may help to better structure forest landscape restoration practice by making landscape arrangements more explicit. However, little is known about how such institutionalisation of landscape governance takes place in practice. The examples are few, scattered and highly localised, and there is limited literature available on how landscape institutions are to be created and strengthened. This knowledge gap has to be closed through the exchange of experiences within and between landscapes in order to identify examples of landscape governance institutions, analyse the way in which they have emerged, and identify key factors and pre-conditions for their success. This is an important step towards restoring and constructing more sustainable and inclusive landscapes across the globe.

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